Job No.: CTCE/BBMP/W.No.09/HSN/CEMENT/2014-15 Date: 10.04.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. H.S. Nataraj,** Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	480 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/W.No.09/HSN/SAND/2014-15 : 10.04.2014

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. H.S. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to Balaji Layout Main Roads in ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014

Date of Testing : 10.04.2014

Material : Sand Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	39	3.90	3.90	96.1	90-100
2.36	180	18.00	21.90	78.1	75-100
1.18	220	22.00	43.90	56.1	55-90
600 Micron	156	15.60	59.50	40.5	35-59
300 Micron	219	21.90	81.40	18.6	8-30
150 Micron	139	13.90	95.30	4.7	0-10

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Job No.: CTCE/BBMP/W.No.09/HSN/AGG/2014-15 : 10.04.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. H.S. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to Balaji Layout Main Roads in ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014

Date of Testing : 10.04.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **5000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	150	3.00	3.00	97.00	95-100
20	3152	63.04	66.04	33.96	30-70
10	1026	20.52	86.56	13.44	10-35
4.75	425	8.50	95.06	4.94	0-5

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Job No.: CTCE/BBMP/W.No.09/HSN /STEEL/2014-15 12.04.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	:	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Date of Test	:	12.04.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.20	O.K	O.K

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Job No.: CTCE/BBMP/W.No.09/HSN /STEEL/2014-15 12.04.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	:	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Date of Test	:	12.04.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.35	O.K	O.K

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Job No.: CTCE/BBMP/W.No.09/HSN/CUBE/2014-15

17.05.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the work	: Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{15}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.04.2014	17.05.2014	8.145	369.9	16.44
2	19.04.2014	17.05.2014	8.235	379.8	16.88
3	19.04.2014	17.05.2014	8.305	389.6	17.32

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Job No.: CTCE/BBMP/W.No.09/HSN/CUBE/2014-15

21.05.2015

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the work	: Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Sample ID	: Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.04.2014	21.05.2015	8.120	479.3	21.30
2	23.04.2014	21.05.2015	8.296	513.6	22.83
3	23.04.2014	21.05.2015	8.326	523.8	23.28

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Job No.: CTCE/BBMP/W.No.09/HSN/WMM/Gradation/2014-15 : 15.05.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. H.S. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014

Date of Testing : 15.05.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	90	90	1.8	98.2	95-100
22.4	1560	1650	33.0	67.0	60-80
11.2	985	2635	52.7	47.3	40-60
4.75	925	3560	71.2	28.8	25-40
2.36	625	4185	83.7	16.3	15-30
0.600	350	4535	90.7	9.3	8-22
0.075	300	4835	96.7	3.3	0-8

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Job No.: CTCE/BBMP/W.No.09/HSN/WMM/AIV/2014-15

15.05.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	15.05.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	394	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	83	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	311	311	
4	Aggregate Impact value = percent fines	20.05	21.07	
	100* (W_2/W_1)%			20.56

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/W.No.09/HSN/WMM/S-T/2014-15 15.05.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of Work	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	15.05.2014

Result : Flakiness Index = **11.36%**

Elongation Index = **13.90%**

Result : Combined Flakiness & Elongation index 25.26%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/W.No.09/HSN/QB(SDBC)/2014-15 21.05.2014

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. H.S. Nataraj,** Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
SAMPLE ID	:	Bitumen
DATE OF TESTING	:	21.05.2014

The results of the tests conducted on the bitumen sample.

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2009)	88	80 to 100
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2009)	43	Min. 40
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2009)	100 >	Min. 75
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2009)	298	Min. 220

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/AIV/2014-15 21.05.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	21.05.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	378	389	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	80	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	298	304	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.16	21.85	**21.51**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

Note:

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Shape_T/2014-15 : 21.05.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of Work	: Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Semi Dense Bituminous Concrete
Date of Testing	: 21.05.2014

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Result : Flakiness Index = **11.39%**

Elongation Index = **13.25%**

Result : Combined Flakiness & Elongation index **24.64%**

Comments:

Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

Note:

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Stripping/2014-15 23.05.2014

Stripping Value of Road Aggregates (Static Immersion Test)

IS: 6241

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the work	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	23.05.2014

Type of binder : 80/100
Percentage of binder used : 5.0% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.0 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.5	3.50	96.50
2	3.4		
3	3.6		

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Comments:

→ Minimum allowable Aggregate retained coating for Semi Dense Bituminous Concrete is 95%

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Sp_Wa/2014-15 23.05.2014

Specific Gravity And Water Absorption Test

IS: 2386 Part III

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Type of Mix	Semi Dense Bituminous Concrete
Source / Location	Hotmix Plant, Bangalore
Date of Testing	23.05.2014

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2010	2012	2013	
2	Weight of basket suspended in water	W_2 g	755	755	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1255	1257	1258	
4	Weight of saturated surface dry aggregate in air	W_3 g	2025	2026	2022	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	770	769	764	
6	Weight of oven dried aggregate	W_4 g	2012	2011	2010	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.613	2.615	2.631	2.620
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.658	2.667	2.673	2.666
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.65%	0.75%	0.60%	0.66%

Comments:

→ Maximum allowable Aggregate Water absorption value for Semi Dense Bituminous Concrete is 2.0%

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Bit/2014-15 23.05.204

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AS per IRC:SP:-1984

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. H.S. Nataraj,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
SAMPLE I/D	Roads in Balaji Layout Ward No.09,
DATE OF TESTING	23.05.204

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	474
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	26.00
7. Bitumen content in %	5.00	5.20
8. Average	**5.10**	

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Bit/2014-15 23.05.204

BITUMEN CONTENT GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. H.S. Nataraj,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
SAMPLE I/D	Roads in Balaji Layout Ward No.09,
DATE OF TESTING	23.05.204

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	24.25	5.11	5.11	94.89	90-100
4.75	258.6	54.44	59.55	40.45	35-51
2.36	53.32	11.23	70.77	29.23	24-39
1.18	41.22	8.68	79.45	20.55	15-30
0.3	33.26	7.00	86.45	13.55	9-19
0.075	30.22	6.36	92.81	7.19	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	28.56	6.03	6.03	93.97	90-100
4.75	260.5	54.96	60.98	39.02	35-51
2.36	35.26	7.44	68.42	31.58	24-39
1.18	33.26	7.02	75.44	24.56	15-30
0.3	42.32	8.93	84.37	15.63	9-19
0.075	45.63	9.63	93.99	6.01	3-8

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/AGG/2014-15 23.05.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete (SDBC)
Date of Testing	23.05.2014

Total Weight of Sample: 5100 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	250	4.9	4.90	95.10	90-100	
4.75	2905	57.0	61.86	38.14	35-51	
2.36	600	11.8	73.63	26.37	24-39	
1.18	520	10.2	83.82	16.18	15-30	
0.3	300	5.9	89.71	10.29	9-19	
0.075	285	5.6	95.29	4.71	3-8	

Total Weight of Sample: 5150 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	240	4.7	4.66	95.34	90-100	
4.75	2850	55.3	60.00	40.00	35-51	
2.36	615	11.9	71.94	28.06	24-39	
1.18	440	8.5	80.49	19.51	15-30	
0.3	315	6.1	86.60	13.40	9-19	
0.075	400	7.8	94.37	5.63	3-8	

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Job No.: CTCE/BBMP/W.No.09/HSN/SDBC/Stability/2014-15 23.05.2014

TEST REPORT ON STABILITY OF MIX

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. H.S. Nataraj,** Contractor, Bangalore.
Name of the Work	:	Improvements to Balaji Layout Main Roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/(7225)/WO/500/2013-14 Dated: 24.02.2014
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Semi Dense Bituminous Concrete
Date of Testing	:	23.05.2014

The results of the tests conducted on the bituminous concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-16)
1	Marshal Stability, Kn	8.55	8.60	8.2 Kn (min)
2	Marshal flow, mm	2.90	3.10	2 – 4
3	Percent air voids in Mineral Aggregate	3.20	3.55	3 – 5
4	Voids in Compacted Mix	13.25	14.10	13 – 15
5	Percent Voids filled with Bitumen	67.25	68.10	65 - 78
6	Density, g/cc	2.26	2.27	--

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